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ABSTRACT

This study examined the abilities of 10-month-old infants to detect correlations between objects and persons based on the characteristic of gender. A total of 32 infants were habituated to six stimuli in which a picture of a male or female face was paired with one of six objects such as a football or frying pan. Three objects were associated with female faces and three with male faces. Infants were then presented with test stimuli in four conditions: (1) control, which duplicated one of the habituation stimuli pairs; (2) generalized, which paired an object from the habituation stimuli pairs with a different face of the same gender; (3) novel, which paired an object from the habituation stimuli pairs with a face of the opposite gender; and (4) unique, which paired a new object with a face. Analysis of infants' looking times indicated that infants' looking times in the control and generalized conditions did not differ from each other and were less than their looking times in the novel test condition. Results suggest that 10-month-old infants are capable of forming categories based on their detection of correlations among features of gender. (SM)

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Infants' Detection of Correlated Features among Social Stimuli: A Precursor to Stereotyping?

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INTRODUCTION

Previous research has demonstrated that infants are able to respond to visual information in terms of rudimentary categories (Younger and Cohen, 1983; 1986; Younger, 1985; 1990)). For example, Younger familiarized 10-month-olds to artificial cartoon animals which contained sets of correlated features (e.g., feathered tail, webbed feet, long neck). Younger concluded that infants categorized stimuli on the basis of the pattern of correlation among stimulus features based on two major findings. First, infants looked at test stimuli which maintained the pattern of features that had been established during familiarization as though they were familiar. Conversely, infants responded to test stimuli which violated the established pattern of correlated features as novel stimuli (i.e., showed increased looking times).

Processes similar to the those which underlie infants' categorization visual patterns have also been implicated by researchers as involved in the formation and maintenance of social stereotypes in children and adults (e.g., Taylor & Crocker, 1981). Martin and Halverson (1987), and others, have discussed gender-role stereotypes in terms of perceptions of correlated features among social information. Hence, stereotypes can be conceptualized as sets of features or characteristics which are associated with a specific gender.

The purpose of the preset study was to examine 10-month-old infants' abilities to categorize social information on the basis of correlations among features.

METHOD

32, full term 10-month-old infants (16 boys, 16 girls) participated. Each stimulus infants viewed contained the picture of a face (male or female) paired with a distinct object (e.g., hammer, blow dryer, football, frying pan). Infants were habituated to a set of six stimuli including six different faces (3 males, 3 females) paired with one of six different objects. Consequently, infants were habituated to two categories of three pictures, one which included objects associated with pictures of female faces, and another with objects associated with pictures of male faces (see Table One).

After infants reached criterion for the set of six habituation stimuli (40% of total looking time on baseline trials), four test stimuli were presented (see Table One). The Control test stimulus contained a person-object pair from the habituation set. The Generalized test stimulus contained a person-object pair which maintained the pattern of features established in the six habituation stimuli. The Novel test stimulus was a person-object pair which violated the pattern of features established in the six habituation stimuli. The Unique test stimulus was a picture unrelated to the habituation stimuli (a beach ball), and was always presented as the last test stimulus to control against fatigue across the experimental session.

PREDICTIONS

1) If infants detected the correlation among the person-object pairs established during habituation then infants' looking times

should demonstrate recovery to the Novel test stimulus, but not the General or Control test stimuli. Furthermore, infants' looking times to the Control and Generalized test stimuli should not differ significantly.

RESULTS

Infants' looking times were evaluated in a series of analyses. The first analysis consisted of a 2 (sex of infant) X 2 (mean looking times in the six baseline trials, the six criterion trials, and at the Unique test stimulus) repeated measures analyses of variance.

Results indicated that infants' mean looking time in the baseline trials was significantly higher than their mean looking time in the criterion trials, and that infants' mean looking time at the Unique test stimulus was significantly greater than their mean looking time in the criterion trials (overall $p < .0001$).

The second analysis was a 2 (sex of infant) X 3 (mean percent looking time at the Control, Generalized, and Novel test stimuli) repeated measures analysis of covariance, with the slope of infants' looking times in the six criterion trials serving as the covariate.

Results indicated that, as expected, infants' looking times for the Control and Generalized test stimuli did not differ significantly. However, consistent with predictions, infants' looking times for the Novel test stimulus were significantly ($p < .03$) greater than their looking times for the Control and Generalized test stimulus (See Table Two and Figure One).

CONCLUSIONS

Results suggest that 10-month-old infants are capable of forming categories based on their detection of correlations among features of social information (i.e., gender).

Consistent with previous research by Younger and Cohen, infants demonstrated increased looking times to social stimuli which violated a set of correlations established in habituation, but showed no such recovery on stimuli which maintained those correlations.

Congruent with models of gender-role and social stereotyping, results indicate that 10-mo-old infants may possess the basic social cognitive abilities needed to process and form categories of social information based on gender-typed associations.

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Table One

Habituation and Test Stimuli

HABITUATION STIMULI (6)

1) Male 1 / Object A

2) Male 2 / Object B

3) Male 3 / Object C

4) Female 1 / Object X

5) Female 2 / Object Y

6) Female 3 / Object Z

TEST STIMULI (4)

1) CONTROL

Male 2 / Object B

2) GENERALIZED

Male 3 / Object A

3) NOVEL

Female 1 / Object C

4) UNIQUE

Beach Ball

Table Two

Mean Looking Times to Stimuli

STIMULI	Mean Looking Time(s)
Baseline Trials (6)	3.116
Criterion Trials (6)	0.931
Control	1.778
Generalized	1.684
Novel	2.361
Unique	3.199